

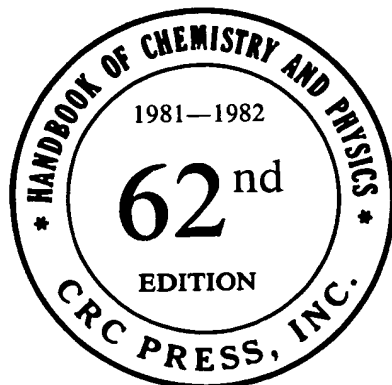
AN 91-356487 [49] WPIDS
 DNN N91-272859
 TI **Brush** assembly for fractional horsepower DC **motor**
 - has two **brushes** side by side connected electrically in
 parallel and having different **resonant frequencies**

DC V04 V06
 IN BALNES, R F; BAINES, R F
 PA (JOHN-N) JOHNSON ELECTRIC SA
 CYC 3
 PI GB 2244603 A 911204 (9149)*
 JP 05146108 A 930611 (9328) H02K005-14
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 AB GB 2244603 A UPAB: 930928
 The electric **motor brush** assembly comprises
 resilient electrically conductive support arranged to carry two or
 more **brushes** axially displaced with respect to a
 longitudinal axis of the **motor** and connected electrically
 in parallel. The support normally comprises a separate arm (18,19)
 for each **brush** ((20,21)).
 The separate arms may be arranged to have different natural
 resonancea frequencies of oscillation. The **brushes** may be
 different sizes and/or of different physical densities.
 ADVANTAGE - Reduces current density required for each
brush without increasing size of **brushes**.
 3/6

FS EPI
 FA AB; GI
 MC EPI: V04-L01B; V06-M12

CRC Handbook of Chemistry and Physics

A Ready-Reference Book of Chemical and Physical Data



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PHYSICAL CONSTANTS OF INORGANIC COMPOUNDS (Continued)

[illegible]

PHYSICAL CONSTANTS OF INORGANIC COMPOUNDS (Continued)

Name	Synonyms and Formulae	Mol. wt.	Crystalline form, properties and index of refraction	Density or spec. gravity	Melting point, °C	Boiling point, °C	Solubility, in grams per 100 cc		
							Cold water	Hot water	Other solvents
Calcium									
salicylate	$\text{Ca}(\text{C}_7\text{H}_5\text{O}_2)_2 \cdot 2\text{H}_2\text{O}$	350.34	wh, oct.	2.88	-2H ₂ O, 120		4 ²⁵	s	s al
selenate	CaSeO_4	183.04	col.	2.68			7.9 ⁴	5.4 ⁴⁷	
selenate, dihydrate	$\text{CaSeO}_4 \cdot 2\text{H}_2\text{O}$	219.07	col, monoc.	2.68					
selenide	CaSe	119.04	cub, 2.274	3.57			0.0095 ¹⁷		s HCl
metasilicate (α)	Nat. pseudowollastonite. CaSiO_3	116.16	col, monocl, 1.610	2.905	1540				
metasilicate (β)	Nat. wollastonite. CaSiO_3	116.16	1.611, 1.664 col, monocl, 1.616	2.5	tr 1200				
di-orthosilicate (I)	Ca_2SiO_4	172.24	1.629, 1.631 col, monocl, 1.717	3.27	2130				
di-orthosilicate (II)	Ca_2SiO_4	172.24	1.735 col, rhomb, 1.717	3.28	tr to (I) 1420				
di-orthosilicate (III)	Ca_2SiO_4	172.24	1.735 col, monocl, 1.642	2.97	tr to 675				
(tri-)silicate	Nat. alite. Ca_3SiO_5 or $(3\text{CaO} \cdot \text{SiO}_2)$	228.32	1.645, 1.654 col, monocl, α 1.718, β 1.724		1900 (incogr)				
silicide	CaSi_2	96.25	col, monocl	2.5			0.004 ¹⁵	d	s a, alk i al, eth
stearate	$\text{Ca}(\text{C}_{18}\text{H}_{35}\text{O}_2)_2$	607.04	cr powd.		179-180		0.193 ¹⁰	0.89 ²⁰	
succinate	$\text{CaC}_4\text{H}_4\text{O}_6 \cdot 3\text{H}_2\text{O}$	212.22	col, 1.460, 1.540, 1.610		monocl 1450	rhomb tr to monocl 1193	0.209 ²⁰	0.1619 ¹⁰⁰	s a, NH ₄ salts, Na ₂ SO ₄ , glyc
sulfate	Nat. anhydrite. CaSO_4	136.14	col, rhomb, or monocl, 1.569, 1.575, 1.613	2.960					
sulfate	Soluble anhydrite. CaSO_4	136.14	col, hex or tricl, 1.505, 1.548	2.61	tr to rhomb >200				
sulfate half-hydrate	Plaster of Paris. $\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$	145.15	wh powd.		- $\frac{1}{2}\text{H}_2\text{O}$, 163		0.3 ²⁰	al s	s a, NH ₄ salts, Na ₂ SO ₄ , glyc
sulfate dihydrate	Nat. gypsum. $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$	172.17	col, monocl, 1.521, 1.523, 1.530	2.32	- $\frac{1}{2}\text{H}_2\text{O}$, 128	-2H ₂ O, 163	0.241	0.222 ¹⁰⁰	s a, NH ₄ salts, Na ₂ SO ₄ , glyc
sulfide	Nat. oldhamite. CaS	72.14	col, cub, 2.137	2.5	d		0.021 ¹⁴ d	0.048 ²⁰ d	d a
sulfide, hydro-	$\text{Ca}(\text{HS})_2 \cdot 8\text{H}_2\text{O}$	214.32	col pr.		d 15-18 -WH ₂ O, >210		0.0043 ¹⁵	0.0011 ¹⁰⁰	s al, s H ₂ SO ₄
sulfite	$\text{Ca}(\text{SO}_3) \cdot \frac{1}{2}\text{H}_2\text{O}$	129.15	col, hex				s		s a
sulfite, dihydrogen	$\text{Ca}(\text{HSO}_3)_2$	202.22	yellow liq, strong SO ₂ odor		d		0.0266 ⁸	0.0689 ^{17, 18}	al s al
d-tartrate	$\text{CaC}_4\text{H}_4\text{O}_6 \cdot 4\text{H}_2\text{O}$	260.21	col, rhomb, 1.525, 1.535, 1.550		-4H ₂ O, 200		0.0032 ²	0.0078 ^{17, 18}	s HCl; i ac, a
dl-tartrate	$\text{CaC}_4\text{H}_4\text{O}_6 \cdot 4\text{H}_2\text{O}$	260.21	tricl, powd or need		-3H ₂ O <170		i	0.16 ¹⁰⁰	0.28 ¹⁸ , 0.85 ¹⁰⁰ ac a
mesotartrate	$\text{CaC}_4\text{H}_4\text{O}_6 \cdot 3\text{H}_2\text{O}$	242.20	wh, monocl or tricl pr						
telluride	CaTe	167.68	cub, 2.51, 2.58	4.873	>960		al s	s	s a
tellurite	CaTeO_3	215.68	wh fl.				s	s	i al
thiocarbonate, tri-	CaCS_3	148.28	yel cr				v s	v s	v s al
thiocyanate	$\text{Ca}(\text{SCN})_2 \cdot 3\text{H}_2\text{O}$	210.29	wh cr, deliq				16 ⁸	30 ²⁰	s al
di-thionate	$\text{Ca}(\text{SO}_3)_2 \cdot 4\text{H}_2\text{O}$	272.27	col, trig, 1.5496	2.176	d		100 ²		
thiosulfate	$\text{CaS}_2\text{O}_3 \cdot 6\text{H}_2\text{O}$	260.30	tricl	1.872	1975				
metatitanate	Nat. perovskite. CaTiO_3	135.98	col, cub, rhomb, β 2.34	4.10			0.00064 ¹⁵	0.00012 ¹⁰⁰	
tungstate	CaWO_4	287.93	wh, tetr, 1.9263, 1.9107	6.062 ²⁰			0.2		i al, a; s NH ₄ Cl
tungstate	Nat. scheelite. CaWO_4	287.93	col or w sc, tetr, 1.918, 1.934	6.06					d a
metatungstate	$\text{Ca}_5\text{H}_4(\text{H}_2(\text{WO}_4)_4) \cdot 27\text{H}_2\text{O}$	3500.96	col, tric.		-7H ₂ O, 105	-10H ₂ O, d	8.28 ²	7.39 ¹⁰⁰	
valerate	$\text{Ca}(\text{C}_8\text{H}_7\text{O}_2)_2$	242.33			2550				
metazirconate	CaZrO_3	179.30	col, monocl	4.78	>3550	4827	i	i	i a, alk
Carbon	Diamond. C	12.01	col, cub, 2.4173	3.51	subl 3652- 97	4827	i	i	s liq Fe; i a, alk
carbon	Graphite. C	12.01	blk, hex	2.25 ²⁰	subl 3652- 97	4827	i	i	i a, alk
carbon, amorphous	C	12.01	amorph, blk	1.8-2.1	subl 3652- 97		i	i	s CS ₂ ; v al s al, eth
(di-)bromide, hexa-	Hexabromomethane. C_6Br_6	503.48	rhomb pr, 1.740, 1.847, 1.863	3.823	148-149 d	210	i		s al, eth, chl
bromide, tetra-	Tetrabromomethane. CBr_4	331.65	col, monocl or oct	3.42	tr to oct 48.4; m.p. 90.1	189.5	0.024 ²⁰		
(di-)bromide, tetra-	Tetrabromethylene. C_2Br_4	343.66			57.5	227			s al, eth, oils
(di-)chloride, hexa-	Hexachloro ethane. C_2Cl_6	236.74	col, rhmb, tricl or cub	2.091	subl 187		i		
chloride, tetra-	Tetrachloromethane. CCl_4	153.81	col liq, 1.4601	1.5867 ²⁰	-23	76.8		v al s	s al, bz, chl, eth
(di-)chloride, tetra-	Tetrachloroethylene. C_2Cl_4	165.83	col liq, eth odor, 1.5055	1.6311 ¹⁵	-22.4	120.8			s al, eth